

10/720, 905

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID: ssspta1201txs

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?) :2

* * * * * * * * * * * * * Welcome to STN International * * * * * * * * * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks (ROSPATENT) added to list of core patent offices covered
NEWS 4 FEB 28 PATDPAFULL - New display fields provide for legal status data from INPADOC
NEWS 5 FEB 28 BABS - Current-awareness alerts (SDIs) available
NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded
NEWS 7 MAR 02 GBFULL: New full-text patent database on STN
NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 10 MAR 22 KOREPAT now updated monthly; patent information enhanced
NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS 12 MAR 22 PATDPASPC - New patent database available
NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS 14 APR 04 EPFULL enhanced with additional patent information and new fields
NEWS 15 APR 04 EMBASE - Database reloaded and enhanced
NEWS 16 APR 18 New CAS Information Use Policies available online
NEWS 17 APR 25 Patent searching, including current-awareness alerts (SDIs), based on application date in CA/Cplus and USPATFULL/USPAT2 may be affected by a change in filing date for U.S. applications.
NEWS 18 APR 28 Improved searching of U.S. Patent Classifications for U.S. patent records in CA/Cplus

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may

10/720,905

result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 11:04:47 ON 10 MAY 2005

FILE 'CAPLUS' ENTERED AT 11:05:11 ON 10 MAY 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 10 May 2005 VOL 142 ISS 20
FILE LAST UPDATED: 9 May 2005 (20050509/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s catalyst  
      687328 CATALYST  
      691224 CATALYSTS  
L1      881222 CATALYST  
                  (CATALYST OR CATALYSTS)
```

```
=> s l1 and (solicon or silica)
      5 SOLICON
      466937 SILICA
      3562 SILICAS
      467334 SILICA
                  (SILICA OR SILICAS)
L2      52967 L1 AND (SOLICON OR SILICA)
```

=> S L2 and titanu?
24 TITANU?
L3 0 L2 AND TITANU?

=> S L2 and titani?
485071 TITANI?
L4 9299 L2 AND TITANI?

=> S L2 and titanium
436990 TITANIUM

10/720,905

78 TITANIUMS
437000 TITANIUM
(TITANIUM OR TITANIUMS)
L5 5497 L2 AND TITANIUM

=> s 15 and (process or prepar? or make or made or method or synthe?)
2081243 PROCESS
1392304 PROCESSES
3097999 PROCESS
(PROCESS OR PROCESSES)
1544794 PREPAR?
115830 PREP
2032 PREPS
117662 PREP
(PREP OR PREPS)
1928624 PREPD
21 PREPDS
1928639 PREPD
(PREPD OR PREPDS)
107105 PREPG
12 PREPGS
107116 PREPG
(PREPG OR PREPGS)
2571390 PREPN
199344 PREPNS
2722386 PREPN
(PREPN OR PREPNS)
4512825 PREPAR?
(PREPAR? OR PREP OR PREPD OR PREPG OR PREPN)
208271 MAKE
161365 MAKES
359123 MAKE
(MAKE OR MAKES)
1145758 MADE
23 MADES
1145778 MADE
(MADE OR MADES)
2829539 METHOD
1178468 METHODS
3676266 METHOD
(METHOD OR METHODS)
1445042 SYNTHE?
L6 4472 L5 AND (PROCESS OR PREPAR? OR MAKE OR MADE OR METHOD OR SYNTHE?
)

=> s 16 and (support or carrier)
414098 SUPPORT
115967 SUPPORTS
492088 SUPPORT
(SUPPORT OR SUPPORTS)
250532 CARRIER
138566 CARRIERS
326472 CARRIER
(CARRIER OR CARRIERS)
L7 1738 L6 AND (SUPPORT OR CARRIER)

=> s 17 and titanium halide
436990 TITANIUM
78 TITANIUMS

10/720,905

437000 TITANIUM
(TITANIUM OR TITANIUMS)

147606 HALIDE

122897 HALIDES

214197 HALIDE

(HALIDE OR HALIDES)

1263 TITANIUM HALIDE

(TITANIUM(W) HALIDE)

L8 19 L7 AND TITANIUM HALIDE

=> s 18 and epoxid?

86221 EPOXID?

L9 5 L8 AND EPOXID?

=> s 18 and oxid?

2734056 OXID?

L10 11 L8 AND OXID?

=> dup rem 18 19 110

PROCESSING COMPLETED FOR L8

PROCESSING COMPLETED FOR L9

PROCESSING COMPLETED FOR L10

L11 19 DUP REM L8 L9 L10 (16 DUPLICATES REMOVED)

=> dup rem 18 111

'19' ANSWERS REMOVED DUE TO ANSWER OVERLAP

PROCESSING COMPLETED FOR L8

PROCESSING COMPLETED FOR L11

L12 19 DUP REM L8 L11 (0 DUPLICATES REMOVED)

=> d 112 ibib hitstr abs 1-19

L12 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:29246 CAPLUS

DOCUMENT NUMBER: 142:114651

TITLE: Preparation method of epoxidation catalysts containing titanium halides and hydrolyzed silica gel carriers

INVENTOR(S): Buijink, Jan Karel Frederik; Crocker, Mark; Van der Grift, Carl Johan Gerrit; Van Vlaanderen, Johannes Jacobus Maria

PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.

SOURCE: PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| WO 2005002723 | A1 | 20050113 | WO 2004-EP51306 | 20040630 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, | | | | |

10/720, 905

TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

US 2005014960 A1 20050120 US 2004-880809 20040630

PRIORITY APPLN. INFO.: EP 2003-254162 A 20030630

AB Process for the preparation of an epoxidn. catalyst which process comprises: (a) drying a silica gel carrier at a temperature 400-1000°; (b) hydrolyzing the dried silica gel carrier; (c) optionally drying the hydrolyzed carrier; and (d) contacting the carrier obtained with a gas stream containing titanium halide to obtain an impregnated carrier, in which process the hydrolysis of step (b) is carried out at a temperature of at most 200°.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:15590 CAPLUS

DOCUMENT NUMBER: 142:98888

TITLE: Plasma deposition of TiO₂ photocatalytic coatings from titanium halide precursor on glass, ceramic or plastic substrates

INVENTOR(S): Durandeau, Anne; Duran, Maxime; Victor, Corinne

PATENT ASSIGNEE(S): Saint-Gobain Glass France, Fr.

SOURCE: Fr. Demande, 25 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| FR 2857030 | A1 | 20050107 | FR 2003-7948 | 20030701 |
| WO 2005012593 | A1 | 20050210 | WO 2004-FR1673 | 20040630 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |

PRIORITY APPLN. INFO.: FR 2003-7948 A 20030701

AB Photocatalytic coatings on glass, glass-ceramic, ceramic or plastic substrates are based on TiO₂ are deposited by plasma CVD from a precursor mixture comprising at least one organometallic precursor and/or a titanium halide in presence of oxidizing and/or reducing agents.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:486423 CAPLUS
 DOCUMENT NUMBER: 141:43514
 TITLE: **Process for preparing an epoxidation catalyst and process for preparing epoxides**
 INVENTOR(S): Buijink, Jan Karel Frederik; Janssen, Frank Joan
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B.V., Neth.
 SOURCE: PCT Int. Appl., 20 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2004050241 | A1 | 20040617 | WO 2003-EP50877 | 20031124 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 2004116723 | A1 | 20040617 | US 2003-720905 | 20031124 |
| US 2004158085 | A1 | 20040812 | US 2003-720921 | 20031124 |
| PRIORITY APPLN. INFO.: | | | EP 2002-258294 | A 20021202 |
| | | | EP 2002-258296 | A 20021202 |

AB The present invention relates to a **process for the prepn . of an epoxidn. catalyst** comprising (i) drying a **silica gel carrier** with weight average particle size 0.1-2 mm at 200-300° and (ii) contacting the **carrier** obtained with a gas stream containing **titanium halide** to obtain an impregnated **carrier** and the use of such **catalyst** in the **preparation** of alkylene oxide. Thus, a **silica gel carrier** with surface area 300 m²/g and weight average particle size 1 mm dried at 225° for 2 h was contacted with a gas stream containing **titanium tetrachloride** heated at 200°, the impregnated **catalyst** obtained was calcined at 600° for 7 h, contacted with steam consisted of 3 g/h water and 8 Nl/h nitrogen at 325° for 6 h, silylated at 185° for 2 h by contacting 18 g/h hexamethyldisilazane in 1.4 Nl/h a nitrogen flow to give a **catalyst**, which was contacted with a feed consisted of octene and ethylbenzene hydroperoxide, giving octylene oxide with selectivity 92.2.

L12 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:486420 CAPLUS
 DOCUMENT NUMBER: 141:43513
 TITLE: **Process for preparation of epoxidation catalysts**
 INVENTOR(S): Van der Linden, Johannes Petrus; Schouten, Eduardus Petrus Simon
 PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B.V., Neth.
 SOURCE: PCT Int. Appl., 17 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent

10/720,905

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2004050233 | A1 | 20040617 | WO 2003-EP50875 | 20031124 |
| WO 2004050233 | C1 | 20040805 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 2004116723 | A1 | 20040617 | US 2003-720905 | 20031124 |
| US 2004158085 | A1 | 20040812 | US 2003-720921 | 20031124 |
| PRIORITY APPLN. INFO.: | | | EP 2002-258296 | A 20021202 |
| | | | EP 2002-258294 | A 20021202 |

AB The present invention relates to (i) a process for the preparation of an epoxidin. catalyst, which process comprises impregnating a silicon containing carrier with a gas stream consisting of titanium halide, and (ii) process for the preparation of alkylene oxide with the help of such catalyst. Thus, a silica gel carrier with surface area 300 m²/g and weight average particle size 1 mm dried at 250° for 2 h was contacted with a gas stream containing titanium tetrachloride heated at 200°, the impregnated catalyst obtained was calcined at 600° for 7 h, contacted with steam consisted of 3 g/h water and 8 Nl/h nitrogen at 325° for 6 h, silylated at 185° for 2 h by contacting 18 g/h hexamethyldisilazane in 1.4 Nl/h a nitrogen flow to give a catalyst, which was contacted with a feed consisted of propene and ethylbenzene hydroperoxide, giving propylene oxide with selectivity 90.9.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:279465 CAPLUS

DOCUMENT NUMBER: 134:297042

TITLE: Supported solid catalyst based on rare earth complexes for the polymerization of conjugated dienes, process for preparing the same and polymerization process using the catalyst

INVENTOR(S): Barbotin, Fanny; Boisson, Christophe; Spitz, Roger

PATENT ASSIGNEE(S): Societe De Technologie Michelin, Fr.; Michelin Recherche Et Technique S.A.

SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

| | | | | |
|--|----|----------|-----------------|------------|
| EP 1092733 | A1 | 20010418 | EP 2000-121835 | 20001006 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| FR 2799394 | A1 | 20010413 | FR 1999-12744 | 19991011 |
| CA 2321363 | AA | 20010411 | CA 2000-2321363 | 20001010 |
| JP 2002030107 | A2 | 20020131 | JP 2000-348831 | 20001011 |
| PRIORITY APPLN. INFO.: | | | FR 1999-12744 | A 19991011 |

OTHER SOURCE(S): MARPAT 134:297042

AB Conjugated diene polymers with high viscosity and cis-1,4-configuration content are manufactured in the presence of M(Ar)(AlX₄)₃ (M = rare earth metal, Ar = aryl, X = halide) supported on a inorg. oxide, with a cocatalyst selected from trialkylaluminum and dialkylaluminum hydride. Preferably, the support is pretreated with a Lewis acid such as MX_n (M = B, Ti, Fe, Al, Zr, Sn, Hf, and Sb, X = halide, n = 3-5).

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:623765 CAPLUS

DOCUMENT NUMBER: 133:209650

TITLE: Heterogeneous epoxidation catalysts for olefins

INVENTOR(S): Han, Yuan-zhang; Morales, Edrick; Gastinger, Robert G.; Carroll, Kevin M.

PATENT ASSIGNEE(S): Arco Chemical Technology, L.P., USA

SOURCE: U.S., 8 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|------------------|------------|
| US 6114552 | A | 20000905 | US 1999-407489 | 19990928 |
| CA 2379567 | AA | 20010405 | CA 2000-2379567 | 20000808 |
| WO 2001023371 | A1 | 20010405 | WO 2000-US21594 | 20000808 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| BR 2000014321 | A | 20020528 | BR 2000-14321 | 20000808 |
| EP 1218365 | A1 | 20020703 | EP 2000-953880 | 20000808 |
| EP 1218365 | B1 | 20041110 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL | | | | |
| JP 2003510315 | T2 | 20030318 | JP 2001-526524 | 20000808 |
| AT 282029 | E | 20041115 | AT 2000-953880 | 20000808 |
| TW 500720 | B | 20020901 | TW 2000-89115830 | 20000905 |
| PRIORITY APPLN. INFO.: | | | US 1999-407489 | A 19990928 |
| | | | WO 2000-US21594 | W 20000808 |

AB Highly active and selective epoxidn. catalysts are prep'd.
. by combining high surface area siliceous support, having

surface area greater than 1100 m²/g, with a **titanium** source. The **titanium** source is a non-oxygenated hydrocarbon solution of a **titanium halide** or a vapor stream of **titanium** tetrachloride. The impregnated **support** is then calcined at an elevated temperature (preferably, in a substantially oxygen-free atmospheric), and, optionally, reacted with water and/or silylated. The resulting materials are highly active heterogeneous epoxidn. **catalysts** for the reaction of olefins to with organic hydroperoxides.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:807878 CAPLUS
 DOCUMENT NUMBER: 133:322293
 TITLE: Amide chelated transition metal olefin polymerization catalyst
 INVENTOR(S): Kong, Gap-Goung; Yoon, Sung-Cheol; Hwang, Gyo-Hyun
 PATENT ASSIGNEE(S): Samsung General Chemicals Co., Ltd., S. Korea
 SOURCE: Brit. UK Pat. Appl., 22 pp.
 CODEN: BAXXDU
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| GB 2346373 | A1 | 20000809 | GB 2000-2510 | 20000203 |
| GB 2346373 | B2 | 20010509 | | |
| KR 2000055232 | A | 20000905 | KR 1999-3747 | 19990204 |
| JP 2000273115 | A2 | 20001003 | JP 2000-32652 | 20000203 |
| JP 3300696 | B2 | 20020708 | | |
| US 6500906 | B1 | 20021231 | US 2000-497639 | 20000203 |
| PRIORITY APPLN. INFO.: | | | KR 1999-3747 | A 19990204 |

OTHER SOURCE(S): MARPAT 133:322293

AB Title **catalyst** is obtained by reacting (1) Mg-Al-amide complex compound which is a reaction product of Mg[AlR'(OR)₃]₂ and an amide ligand with (2) a transition metal halide compound MX₄, where R, R' = independently alkyl or aryl, M = Ti or Zr, and X = halogen. The olefin polymerization is performed using a catalytic system comprising the chelated transition metal **catalysts** component, MgCl₂ **support** component, and an organoaluminum cocatalyst component and produces a polymer having narrow mol. weight distribution, narrow compositional distribution, excellent morphol., and good processibility. Thus, Mg[AlR'(OR)₃]₂, where R= 2-ethylhexyl and R'= Bu or iso-Bu, prepared from of triethylaluminum 800, 2-ethylhexanol 2400, and dibutylmagnesium 400 mmol and 82.4 g dicyclohexylcarbodiimide were stirred for 3 h at room temperature to give Mg-Al complex containing carbodiimide ligand. The complex was added to 133.7 g TiCl₄(THF)₂ and stirred for 6 h to give a chelated **titanium catalyst** solution. The chelated **titanium catalyst** (175 mmol) was stirred with 350 g spherical MgCl₂ (preparation given) at 50° for 3 h to give a **catalyst** with **titanium** content 1.2%. Ethylene was polymerized in the presence of 3 mmol trioctylaluminum and the resulting **titanium catalyst** (0.1 mmol Ti) at 70° for 1 h showing **catalyst** activity 2200 g-PE/mmole-Ti-h, melt index (2.16 kg/10 min at 230°) 0.7 , melt flow ratio (21.6 kg/2.16 kg, 10 min at 230°) 25.3, and bulk d. 0.42 g/cm³.

L12 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2000:312461 CAPLUS
 DOCUMENT NUMBER: 132:294133
 TITLE: Ethylene dimerization **catalyst** and
 catalyst system comprising dimerization
 catalyst and ethylene polymerization
 catalyst
 INVENTOR(S): Liu, Ainan; Yu, Hui; Sun, Xiaolin; Guan, Peitian; Yu,
 Jinfeng; Liu, Yongshui; Wang, Yueyun
 PATENT ASSIGNEE(S): Sinopec, Peop. Rep. China; China, Ministry of Chemical
 Industry, Beijing Chemical Industry Institute
 SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 12 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| CN 1216722 | A | 19990519 | CN 1997-119969 | 19971031 |
| CN 1077577 | B | 20020109 | CN 1997-119969 | 19971031 |

PRIORITY APPLN. INFO.:
 OTHER SOURCE(S): MARPAT 132:294133
 AB An ethylene dimerization **catalyst** system comprises component (A)
 obtained by contacting a chlorine-free inorg. porous **support**
 material, a **titanium** tetraalkoxide, and an electron donor
 selected from ethers, esters, and acid anhydrides, component (B) which is
 a liquid alkoxy silane, and co-**catalyst** trialkylaluminum. A
 combined **catalyst** system comprising the dimerization
catalyst and a **titanium halide**-based ethylene
 polymerization **catalyst** provides ethylene-1-butene copolymer with
 various d. while using ethylene as the only starting material.

L12 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:1081250 CAPLUS
 DOCUMENT NUMBER: 142:280553
 TITLE: Preparation of aluminum magnesium
 titanium halide Ziegler-Natta
 catalyst for olefin polymerization
 INVENTOR(S): Russell, Charles; Kelly, Mark; Ker, Victoria; Jeremic,
 Dusan
 PATENT ASSIGNEE(S): Nova Chemicals Corp., Can.
 SOURCE: Can. Pat. Appl., 24 pp.
 CODEN: CPXXEB
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| CA 2267946 | AA | 19991112 | CA 1999-2267946 | 19990406 |

PRIORITY APPLN. INFO.: US 1998-76560 A 19980512
 AB A novel process for preparing a **catalyst**,
 preferably free of electron donor, useful in gas phase polymerization of
 alpha-olefins having a broad polydispersity, conducted in a hydrocarbon
 solvent at a temperature from 0 °C to 100 °C, comprises the steps:

(a) contacting a dehydrated **silica support** comprising from 0.1 to 3 weight% of an aluminum compound $\text{Al}_1(\text{R}_1)_a\text{X}_b$, wherein each R_1 is independently selected from the group consisting of C1-10 alkyl radicals, X is selected from the group consisting of Cl and Br, a and b are 0 or an integer from 1 to 3 provided the sum of $a+b=3$; (b) adding a mixture of an aluminum compound and a magnesium compound wherein the molar ratio of Mg:Al₂ in said mixture is from 0.5:1 to 25:1 to provide from 0.2 to 8.0 weight% of Mg based on the weight of the **silica** in the resulting product; (c) contacting the resulting product with CCl_4 or a secondary or tertiary alkyl halide R_4Cl , wherein R_4 is selected from the group consisting of C3-6 alkyl radicals to provide a molar ratio of Cl:Mg from 1:1 to 8:1 in the resulting product; (d) finally reacting with a **titanium** compound, $\text{Ti}(\text{R}_5)_y(\text{Cl})_z$ wherein each R_5 is selected from the group consisting of C1-10 alkyl radicals and C6-8 aryl radicals which are unsubstituted or substituted by a C1-4 alkyl radical, y and z are 0 or an integer from 1 to 4 provided that the sum of $y+z=4$ to provide from 0.1 to 1.5 weight% of Ti based on the **silica**. Aluminum compound is $\text{Al}_2(\text{R}_2)_n\text{X}_m$, wherein each R_2 is independently selected from the group consisting of C1-10 alkyl radicals, X is selected from the group consisting of Cl and Br, m and n are 0 or an integer from 1 to 3 provided the sum of $n+m=3$; while the magnesium compound is $\text{Mg}(\text{R}_3)_2$ wherein each R_3 is independently selected from the group consisting of C1-10 alkyl radicals. Thus, triethylaluminum, MAGALA (a dibutylmagnesium-triethylaluminum **catalyst** complex), tert-Bu chloride and **titanium** chloride are used as a **catalyst for synthesizing** ethylene-hexene copolymer at 88°, yielding the polymer with a d. of 0.9191 g/cc, and a bulk d. of 25.6 lb/ft³.

L12 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1081234 CAPLUS

DOCUMENT NUMBER: 142:280552

TITLE: **Preparation of aluminum, magnesium and titanium halide Ziegler-Natta catalyst for olefin polymerization**

INVENTOR(S): Kelly, Mark; Ker, Victoria; Jeremic, Dusan; Russell, Charles

PATENT ASSIGNEE(S): Nova Chemicals Corp., Can.

SOURCE: Can. Pat. Appl., 24 pp.

CODEN: CPXXEB

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| CA 2267939 | AA | 19991112 | CA 1999-2267939 | 19990406 |
| PRIORITY APPLN. INFO.: | | | US 1998-76280 | A 19980512 |

AB A novel **process for preparing a catalyst**, preferably free of electron donor, useful in gas phase polymerization of alpha-olefins having a broad polydispersity, conducted in a hydrocarbon solvent at a temperature from 0° to 100°, comprises the steps: (a) contacting a dehydrated **silica support** comprising from 0.1 to 3 wt% of an aluminum compound $\text{Al}_1(\text{R}_1)_a\text{X}_b$, wherein each R_1 is independently selected from the group consisting of C1-10 alkyl radicals, X is selected from the group consisting of Cl and Br, a and b are 0 or an integer from 1 to 3 provided the sum of $a+b=3$; (b) adding to the **support** in a quantity of 2 to 30 wt%, preferably from 5 to 20 wt% based on the weight of **silica**, CCl_4 or a secondary or tertiary

alkyl halide, R₄Cl wherein R₄ is selected from the group consisting of C₃-6 alkyl radicals; (c) contacting the resulting product with, in any order or in combination an aluminum and a magnesium compound wherein the molar ratio of Mg:Al₂ in said mixture is from 0.5:1 to 25:1 to provide from 0.25 to 8.0 wt% of Mg based on the weight of the silica, a molar ratio of Cl:Mg from 1:1 to 8:1 in the resulting product; (d) finally reacting with a titanium compound, Ti(R₅)_y(Cl)_z wherein each R₅ is selected from the group consisting of C₁-10 alkyl, alkoxide and Ph radicals which are unsubstituted or substituted by a C₁-4 alkyl radical, y and z are 0 or an integer from 1 to 4 provided that the sum of y+z=4 to provide from 0.1 to 1.5 wt% of Ti based on the silica. The aluminum compound is Al₂(R₂)_nX_m, wherein each R₂ is independently selected from the group consisting of C₁-10 alkyl radicals, X is selected from the group consisting of Cl and Br, m and n are 0 or an integer from 1 to 3 provided the sum of n+m=3; while the magnesium compound is Mg(R₃)₂ wherein each R₃ is independently selected from the group consisting of C₁-10 alkyl radicals. Thus, triethylaluminum, MAGALA (a dibutylmagnesium-triethylaluminum catalyst complex), tert-Bu chloride and titanium chloride on silica support are used as a catalyst for synthesizing ethylene-hexene copolymer at 88°, yielding a LLDPE with a bulk d. of 20.3 lb/ft³.

L12 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1998:745045 CAPLUS
 DOCUMENT NUMBER: 130:14316
 TITLE: Epoxidation of olefins using an improved heterogeneous catalyst composition
 INVENTOR(S): Han, Yuan-zhang; Carroll, Kevin M.; Morales, Edrick; Gastinger, Robert G.
 PATENT ASSIGNEE(S): Arco Chemical Technology, L.P., USA; Arco Chemie Technologie Nederland B.V.
 SOURCE: PCT Int. Appl., 33 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 9850374 | A2 | 19981112 | WO 1998-EP2681 | 19980504 |
| WO 9850374 | A3 | 19990211 | | |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| CA 2287079 | AA | 19981112 | CA 1998-2287079 | 19980504 |
| AU 9881035 | A1 | 19981127 | AU 1998-81035 | 19980504 |
| EP 984949 | A2 | 20000315 | EP 1998-930675 | 19980504 |
| EP 984949 | B1 | 20040303 | | |
| R: BE, DE, ES, FR, GB, IT, NL, SE | | | | |
| BR 9809020 | A | 20000801 | BR 1998-9020 | 19980504 |
| RU 2181121 | C2 | 20020410 | RU 1999-125770 | 19980504 |
| JP 2002514218 | T2 | 20020514 | JP 1998-547741 | 19980504 |
| MX 9910143 | A | 20000331 | MX 1999-10143 | 19991104 |

PRIORITY APPLN. INFO.: US 1997-851105 A 19970505
 US 1997-900794 A 19970725
 US 1998-60375 A 19980415
 WO 1998-EP2681 W 19980504

AB Highly active and selective epoxidn. **catalysts** are prep'd by combining **silica** or the like with a nonoxygenated hydrocarbon solution of **titanium halide**, removing solvent, calcining at an elevated temperature (preferably, in a substantially oxygen-free atmospheric), and, optionally, reacting with water and silylating. The resulting materials are useful heterogeneous **catalysts** for transforming olefins to epoxides using organic hydroperoxides.

L12 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:760043 CAPLUS
 DOCUMENT NUMBER: 130:14342
 TITLE: Loop/slurry polymerization process for producing ultra high molecular weight ethylene homopolymers
 INVENTOR(S): Martin, Joel Leonard; Secora, Steven Joseph; Benham, Elizabeth Ann; McDaniel, Max Paul; Hsieh, Eric Tsu-yin; Johnson, Timothy Walter
 PATENT ASSIGNEE(S): Phillips Petroleum Company, USA
 SOURCE: Eur. Pat. Appl., 10 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| EP 878490 | A2 | 19981118 | EP 1998-108925 | 19980515 |
| EP 878490 | A3 | 19990217 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| US 6034186 | A | 20000307 | US 1997-857788 | 19970516 |
| AU 9861985 | A1 | 19981119 | AU 1998-61985 | 19980420 |
| AU 700622 | B2 | 19990107 | | |
| JP 10324716 | A2 | 19981208 | JP 1998-127695 | 19980511 |
| CN 1199740 | A | 19981125 | CN 1998-108478 | 19980514 |
| CA 2238241 | AA | 19981116 | CA 1998-2238241 | 19980515 |
| CA 2238241 | C | 20030218 | | |
| NO 9802241 | A | 19981117 | NO 1998-2241 | 19980515 |
| US 6037433 | A | 20000314 | US 1998-191800 | 19981113 |
| | | | US 1997-857788 | A 19970516 |

PRIORITY APPLN. INFO.: MARPAT 130:14342

OTHER SOURCE(S):
 AB The **process** is carried out at 66-82° in the presence of a hydrocarbon diluent and in the absence of hydrogen with (i) a **catalyst** system comprising a magnesium compound and a **titanium halide** both supported on an inorg. oxide and (ii) an aluminum alkyl cocatalyst. Thus, ethylene was polymerized using Sylropol 5910 **catalyst** having average particle size 10 µm and Mg/Ti mol ratio of 9.69, triethylaluminum cocatalyst, and isobutane diluent without addition of hydrogen in a 73.3° liquid full loop reactor to give a ethylene homopolymer, which was blended with 0.4% calcium stearate and compression-molded giving d. 0.931 g/cc, bulk d. 24 lbs/ft³, tensile strength (yield) 22.4 MPa, tensile strength (break) 43.7 MPa, elongation 232%, Izod impact 59 kJ/m², tensile impact 2545 kJ/m², flexural modulus 727 MPa, sand wheel abrasion 90 g, and Shore D hardness 70.

L12 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1997:124833 CAPLUS
 DOCUMENT NUMBER: 126:215592
 TITLE: Compounds and compositions for coating glass with silicon oxide
 INVENTOR(S): Neuman, George A.; Athey, Patricia R.; Stewart-Davis, Royann L.
 PATENT ASSIGNEE(S): PPG Industries, Inc., USA
 SOURCE: U.S., 18 pp., Cont.-in-part of U.S. 5,464,657.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------|
| US 5599387 | A | 19970204 | US 1995-472589 | 19950607 |
| US 5356718 | A | 19941018 | US 1993-17930 | 19930216 |
| JP 2000143294 | A2 | 20000523 | JP 1999-326457 | 19940215 |
| JP 3476724 | B2 | 20031210 | | |
| US 5464657 | A | 19951107 | US 1994-264816 | 19940623 |
| US 5776236 | A | 19980707 | US 1996-678252 | 19960711 |
| PRIORITY APPLN. INFO.: | | | US 1993-17930 | A3 19930216 |
| | | | US 1994-264816 | A2 19940623 |
| | | | JP 1994-18633 | A3 19940215 |
| | | | US 1995-472589 | A3 19950607 |

AB In a coating composition vapor for the pyrolytic deposition of SiO₂, comprising a carrier gas, a source of O, and a Si compound, the improvement comprises ≥1 Si compds. having general formula RiOSiR₂(R₃)(R₄) (R₁₋₃ to be defined; R₂ = functional group or atom, excluding H, capable of withdrawing electron d. away from the Si atom to weaken the bond between the R₂ functional group and the Si atom for ease of separating the R₂ functional group from the Si atom). More specifically, R₁ is selected from (substituted) C₁₋₁₀-alkyl radicals, (substituted) C₂₋₁₀-alkenyl radicals, (substituted) C₂₋₁₀-alkynyl radicals, (substituted) C₆₋₁₁-aryl, (substituted) C₆₋₁₁-aralkyl radicals, R₂ is selected from H, halogen, (substituted) C₂₋₁₀-alkenyl radicals, halogenated C₁₋₁₀-alkyl and perhalogenated C₁₋₁₀-alkyl radicals, (substituted) C₂₋₁₀-alkynyl radicals, R₃ and R₄ are to be defined, and the compns. may include an accelerator selected from tetravalent compds. of S and Se, and from O₃, Lewis acids, and Lewis bases. The compds. are suitable for use as accelerants, increasing the deposition rate of the Si oxide. Addnl. the compns. may include a metal-containing coating precursor, e.g., an organotin compound, to deposit another oxide along with Si oxide. The compns. are especially suitable for coating float glass in its manufacturing stage.

L12 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1995:452248 CAPLUS
 DOCUMENT NUMBER: 122:195027
 TITLE: Reticulated ceramic particles, and their manufacture and use
 INVENTOR(S): Whitman, David William
 PATENT ASSIGNEE(S): Rohm and Haas Co., USA
 SOURCE: Eur. Pat. Appl., 14 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English

10/720,905

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| EP 639544 | A2 | 19950222 | EP 1994-305507 | 19940726 |
| EP 639544 | A3 | 19970709 | | |
| EP 639544 | B1 | 20000503 | | |
| R: DE, FR, GB, IT | | | | |
| US 5399535 | A | 19950321 | US 1993-107861 | 19930817 |
| ZA 9405821 | A | 19950217 | ZA 1994-5821 | 19940804 |
| CA 2129769 | AA | 19950218 | CA 1994-2129769 | 19940809 |
| JP 07187846 | A2 | 19950725 | JP 1994-213227 | 19940816 |
| PRIORITY APPLN. INFO.: | | | US 1993-107861 | A 19930817 |

AB The particles have microporous volume 0-60, mesoporous volume 5-95, and macroporous volume 0-95 for a total of 100% of the porosity. The particles are manufactured by impregnating a porous matrix material with ≥1 liquid precursor ceramics, forming a gel from the precursors, forming ceramics from the gel, and removing at least part of the matrix material selected from porous SiO₂, zeolites, and porous polymers, e.g., ion exchange resins and adsorbents. The reticulated ceramic particles are used as chromatog. medium, **catalysts**, and adsorbents. The reticulated ceramic particles provided comprise SiO₂, Al₂O₃, ZrO₂, and RuO₃.

L12 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:290071 CAPLUS

DOCUMENT NUMBER: 122:56813

TITLE: Cocatalyst for vanadium-titanium containing polymerization **catalyst**

INVENTOR(S): Menon, Raghu; Masino, Albert P.; Reinking, Mark K.

PATENT ASSIGNEE(S): Quantum Chemical Corp., USA

SOURCE: U.S., 9 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| US 5346872 | A | 19940913 | US 1993-10737 | 19930129 |
| PRIORITY APPLN. INFO.: | | | US 1993-10737 | 19930129 |

AB Halosilanes improve the activity of **silica-supported V-Ti catalysts** containing aluminum compound cocatalysts in the polymerization of ethylene and(or) α-olefins and increase the melt index values of the polymers. Thus, polymerization of ethylene in the presence of hexamethyldisilazane-treated **silica-supported 2-methylpentyl oxy magnesium chloride-SiCl₄-tri-iso-Bu vanadate-TiCl₄ solid catalyst**, Et₃Al cocatalyst, H, and SiCl₄ cocatalyst gave a polymer at 34% higher activity than when SiCl₄ was not used as the cocatalyst. The melt index of the polymer **prepared** in the presence of SiCl₄ cocatalyst was 12.7, compared with 8.9 when SiCl₄ was not used as a cocatalyst.

L12 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:77909 CAPLUS

DOCUMENT NUMBER: 120:77909

TITLE: Catalyst for the stereospecific polymerization of propylene and other olefins

INVENTOR(S): Milani, Federico; Luciani, Luciano; Labianco, Antonio
 PATENT ASSIGNEE(S): ECP Enichem Polimeri S.r.l., Italy
 SOURCE: Eur. Pat. Appl., 13 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| EP 558137 | A2 | 19930901 | EP 1993-200482 | 19930219 |
| EP 558137 | A3 | 19940706 | | |
| EP 558137 | B1 | 19970502 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | |
| AT 152459 | E | 19970515 | AT 1993-200482 | 19930219 |
| ES 2100440 | T3 | 19970616 | ES 1993-200482 | 19930219 |
| US 5348925 | A | 19940920 | US 1993-20990 | 19930222 |
| HU 69295 | A2 | 19950928 | HU 1993-1280 | 19930430 |
| HU 213866 | B | 19971128 | | |
| BR 9301799 | A | 19941129 | BR 1993-1799 | 19930510 |
| JP 06345814 | A2 | 19941220 | JP 1993-134673 | 19930604 |
| PRIORITY APPLN. INFO.: | | | IT 1992-MI414 | A 19920226 |

AB A solid catalyst component active in the title use is prepared by (a) blocking a nonactivated silica support with a Sn tetrahalide (e.g., SnCl₄) to at least partly block OH groups on the surface, (b) impregnating the support with Mg dialkyl or Mg alkyl halide, (c) halogenating with halides of Sn, Sb, or Si, (d) titanating with excess Ti tetrahalide, and (e) contacting with Lewis base, and used with Al cocatalyst and electron donor to polymerize propylene. A SnCl₄-blocked SiO₂-supported component prepared by impregnating Mg Bu octyl, halogenating with SbCl₄, titanating with TiCl₄, and contacting with diisobutyl phthalate (DIBP) at Mg:Ti:DIBP ratio 1:34.5:0.12 was used with AlEt₂ and MeO₂Ph₂Si to manufacture isotactic polypropylene of melt flow index (5 kg; 230°) 5.44 g/10 min.

L12 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1986:89215 CAPLUS
 DOCUMENT NUMBER: 104:89215
 TITLE: Polymerization catalysts
 INVENTOR(S): Best, Steven A.
 PATENT ASSIGNEE(S): Exxon Research and Engineering Co. , USA
 SOURCE: U.S., 8 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-------------------------------|------|----------|-----------------|------------|
| US 4558024 | A | 19851210 | US 1984-638165 | 19840806 |
| AU 8545779 | A1 | 19860213 | AU 1985-45779 | 19850805 |
| JP 61087703 | A2 | 19860506 | JP 1985-172250 | 19850805 |
| EP 173488 | A1 | 19860305 | EP 1985-305578 | 19850806 |
| R: BE, DE, FR, GB, IT, NL, SE | | | | |
| US 4634748 | A | 19870106 | US 1985-777394 | 19850918 |
| PRIORITY APPLN. INFO.: | | | US 1984-638165 | A 19840806 |

10/720,905

AB Olefin polymerization **catalysts prepared** from porous particulate **supports**, Group IIa, IIb, or IIIa metal organic compds., transition metal compds., Group IIIa methyl haloalkyls, and, optionally, O compds., give polymers with narrow mol. weight distribution and high tear strength. Thus, a **catalyst prepared** from **silica**, EtAlCl₂, BuEtMg, and TiCl₄, used with iso-Bu₃Al, gave 1-butene-ethylene copolymer with sp. activity 22.6 and melt index ratio 32.3.

L12 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1984:611864 CAPLUS
DOCUMENT NUMBER: 101:211864
TITLE: Preparation of polymers
PATENT ASSIGNEE(S): Japan Synthetic Rubber Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 59098110 | A2 | 19840606 | JP 1982-207661 | 19821129 |
| PRIORITY APPLN. INFO.: | | | JP 1982-207661 | 19821129 |

AB Conjugated dienes are polymerized alone or with olefins in high yield using **catalysts prepared** by treating porous metal oxide **supports** having sp. surface area (S) \geq 10 m²/g, particle diameter (D) \leq 100 μ , and average pore diameter (.hivin.d) \geq 50 Å with Ti³⁺ or Ti⁴⁺ halides, which react with HO groups on the metal oxide surface, and then (in the case of Ti⁴⁺ halides) with reducing agents. Thus, vacuum-dried **silica** (S 300 m²/g, D 35 μ , .hivin.d 200 Å) was refluxed with a solution of TiCl₄ in heptane, washed and dried, then treated with Et₂AlCl [96-10-6] in heptane, washed, and dried under N. The resulting **catalyst** was slurried in heptane containing Et₂AlCl, and 1,3-butadiene was contacted with the slurry at 65° to obtain polybutadiene [9003-17-2] containing 50% cis-1,4-, 50% trans-1,4-, and .apprx.0% 1,2- units, at **catalyst** activity 0.62 kg/g Ti-h.

L12 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1984:531305 CAPLUS
DOCUMENT NUMBER: 101:131305
TITLE: Polyolefins
PATENT ASSIGNEE(S): Toyo Soda Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 59096107 | A2 | 19840602 | JP 1982-204528 | 19821124 |
| PRIORITY APPLN. INFO.: | | | JP 1982-204528 | 19821124 |

AB A solid product **prepared** by reacting a hydrocarbon halide, an electron donor, and MgRR₁ (R, R₁ = C₁₋₂₀ hydrocarbon) in the presence of a **silica**, Al₂O₃, or **silica-Al₂O₃** **support** treated with an organoaluminum compound is treated with a phenol compound and a Ti

10/720,905

halide to give a solid **catalyst** which is used with an organoaluminum compound to **prepare** olefin (co)polymers. The **method** gives polyolefins having a high stereoregularity and ideal granule size at a high catalytic activity. Thus, **silica gel** treated with Et₃Al was agitated with MgBuEt, Et benzoate, and CCl₄ to give a solid product which was then agitated with p-cresol and TiCl₄ to give a solid **catalyst**. Liquid propylene was polymerized in the presence of the above **catalyst**, Et₃Al, and Et benzoate to give polypropylene having a high isotactic index and ideal granule size.

=> log Y

COST IN U.S. DOLLARS

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |

FULL ESTIMATED COST

| | |
|-------|-------|
| 90.22 | 90.43 |
|-------|-------|

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |

CA SUBSCRIBER PRICE

| | |
|--------|--------|
| -13.87 | -13.87 |
|--------|--------|

STN INTERNATIONAL LOGOFF AT 11:12:43 ON 10 MAY 2005